COASTAL TEXAS STUDY

Welcome!

PLEASE TAKE A PROJECT HANDOUT

COASTAL TEXAS STUDY
STUDY SUMMARY

US Army Corps of Engineers® Galveston District

FAST FACTS

- The Texas coastal region is home to 25 percent of the entire state's population.
- Galveston Bay and Corpus Christi Bay are 2 of 28 National Estuary Programs in the U.S.
- There are 12 National Wildlife Refuges in the study area.
- The study area includes significant commercial fisheries for oysters, shrimp, and finfish.
- Texas is the nation's top state for waterborne commerce with Texas ports representing over $82.8 billion in economic value to the state.
- The Texas coast is home to four of the eight largest refineries in the country, and represent 25 percent of the nation's refinery capacity and most of the National Petroleum Reserve.

COASTAL TEXAS STUDY TEAM CONTACTS:
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ABOUT THE STUDY

The U.S. Army Corps of Engineers (USACE), in partnership with the Texas General Land Office (GLO), began an examination in November 2015 of the feasibility of constructing projects for coastal storm risk management and ecosystem restoration along the Texas coast. The goal of the Coastal Texas Study is to enhance resiliency in coastal communities and improve capabilities to prepare for, resist, recover and adapt to coastal hazards.

To meet that goal the study team identified and screened numerous projects and individual measures and determined a Tentatively Selected Plan (TSP). Alternatives analysis and plan selection is an iterative process based on economic, engineering, social, and environmental factors. The Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS) is a comprehensive report that documents that process.

When the DIFR-EIS is complete and finalized, the TSP, consisting of storm risk management and ecosystem restoration features, will be recommended to Congress for authorization, funding, and construction.

ABOUT THE STUDY AREA

The study area consists of the entire Texas Gulf coast from the mouth of the Sabine River to the mouth of the Rio Grande, and includes the Gulf and tidal waters, barrier islands, estuaries, coastal wetlands, rivers and streams, and adjacent areas that make up the interrelated ecosystems along the coast of Texas.

PURPOSE OF THE STUDY

The Texas coast is subject to coastal erosion, relative sea level rise, coastal storm surge, habitat loss and water quality degradation. These coastal hazards are placing the environmental and economic health of the coast at risk, which can negatively impact the state and national economy. In addition, events such as Hurricane Rita, Hurricane Ike and Hurricane Dolly, caused further ecological and economic devastation to the Texas coast, and emphasize the need for enhanced protection of the coast to prevent future damage and loss.

This feasibility study is necessary to determine if there is Federal interest in supporting projects for CSRM and ER that would protect the health and safety of Texas coastal communities, reduce the risk of storm damage to industries and businesses critical to the Nation's economy, and address critical coastal ecosystems in need of restoration.

More information is available online at:
http://coastalstudy.texas.gov

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PLEASE TAKE A COMMENT FORM

COASTAL TEXAS STUDY

Coastal Texas Protection & Restoration Feasibility Study
Comment Form/Formulario de Comentarios

ARE YOU A PUBLIC OFFICIAL? / ¿ES USTED UN FUNCIONARIO PÚBLICO?

❑ **YES**/SÍ ❑ **NO**/NO **If yes, position**/Puesto: ______________________

First and Last Name/Nombre y Apellido	**How did you learn about this public hearing to present and discuss the Coastal Texas Protection & Restoration Feasibility Study?** ¿Cómo se enteró de esta reunión pública para presentar y discutir el estudio de factibilidad de protección y restauración en la costa de Texas?
Mailing Address/Dirección de Envío	❑ **Newspaper Notice**/Aviso de Periódico
City, State, Zip Code/Ciudad, Estado, Código Postal	❑ **Notice in Mail**/Aviso por Correo ❑ **Email**/Correo Electrónico
Email Address/Correo Electrónico	❑ **Website**/Sitio web ❑ **Other (please explain)**/Otro (por favor de explicar)
Affiliation/Afiliación	______________________

How would you prefer to receive information about this study? (Please check one)/¿Cómo prefiere recibir información sobre el estudio? (Por favor marque uno)
❑ **Website**/Sitio web ❑ **Mail**/Correo ❑ **Email**/Correo Electrónico ❑ **Newspaper**/Periódico
❑ **Other (please explain)**/Otro (por favor de explicar)______________________

COMMENTS ***(Please make additional comments on the back, if needed.)***
COMENTARIOS *(Por favor hacer sus comentarios adicionales en la parte posterior.)*

This comment form may be turned in at the public meeting, mailed to the address on the back of this page, or emailed to: CoastalTexas@usace.army.mil by January 9, 2019. Thank you for your participation in this study.
Este formulario de comentarios se puede entregar en la reunión pública, enviar a la dirección en la parte posterior de esta hoja, o enviar por correo electrónico antes del 9 de enero 2019 a CoastalTexas@usace.army.mil. Gracias por su participación en este estudio.

COASTAL TEXAS STUDY

The U.S. Army Corps of Engineers (USACE) and the Texas General Land Office (GLO) welcome you to the **Public Meeting for the Coastal Texas Protection and Restoration Feasibility Study.**

US Army Corps of Engineers® Galveston District

TEXAS GENERAL LAND OFFICE ESTABLISHED 1836

PLEASE SIGN IN HERE

What is the purpose of this public meeting?

- Invite public participation in the study process
- Solicit public comments for consideration on the Draft Integrated Feasibility Report and Environmental Impact Statement and the proposed Tentatively Selected Plan

THE STUDY TEAM AND PUBLIC

U.S. Army Corps of Engineers
(The Lead Agency)

Texas General Land Office
(The Non-Federal Sponsor)

You
The Public and Local Stakeholders

We are here to receive ***your comments*** on the **Draft Integrated Feasibility Report and Environmental Impact Statement** and the proposed **Tentatively Selected Plan**.

We want to hear from ***you*** about the ***Coastal Texas Study***.

COASTAL **TEXAS** STUDY

About the Study

What is the purpose of the study?

This study is necessary to determine if there is federal interest in supporting projects for **coastal storm risk management (CSRM)** and **ecosystem restoration (ER)** that would:

- Protect the health and safety of Texas coastal communities
- Reduce the risk of storm damage to residences, industries, and businesses vital to the Nation's economy
- Restore and enhance critical coastal ecosystems

What is the goal of the study?

The goal of the Coastal Texas Study is to:

- Promote a sustainable economy by reducing the risk of storm damage to residential structures, industries, and businesses critical to the Nation's economy
- Promote a sustainable coastal ecosystem by minimizing future land loss, enhancing wetland productivity, and providing and sustaining diverse fish and wildlife habitat

What is the study objective?

The objective of the Coastal Texas Study is to develop a comprehensive plan that will manage the risk associated with coastal storms while avoiding and minimizing impacts to the region's environmental resources.

Where is the study area?

The study area consists of the **entire Texas Gulf coast from the mouth of the Sabine River to the mouth of the Rio Grande**, and includes the Gulf and tidal waters, barrier islands, estuaries, coastal wetlands, rivers, and streams that make up the interrelated ecosystems along the coast of Texas.

STUDY AREA

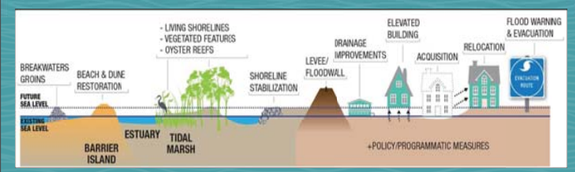
Study Approach

A **"multiple lines of defense"** strategy is utilized in the formulation of the measures and alternatives. Employing three primary goals – **preserve, minimize, and avoid** – coastal communities should consider a system of comprehensive, resilient and sustainable coastal storm risk management and ecosystem restoration solutions.

To achieve a multiple lines of defense approach, the study evaluates the following issues of concern:

- Economic damage to communities from coastal storm surge
- Shoreline erosion
- Loss of threatened and endangered critical habitats
- Disrupted hydrology

A combination of measures form a **multiple lines of defense strategy**.



COASTAL **TEXAS** STUDY

The Study Process

What is an Environmental Impact Statement (EIS)?

As required by the National Environmental Policy Act (NEPA), an EIS is prepared to analyze the significant impacts that a major Federal action may have on the environment and local community.

What is a Feasibility Study?

The feasibility study process evaluates solutions to problems by analyzing the engineering, economic, environmental, cost, real estate, and other impacts and aspects of alternative solutions.

This study process is then used to identify a plan of most value to the national economy.

The EIS preparation and Feasibility Study are being ***conducted concurrently*** to result in a single **Draft Integrated Feasibility Report and Environmental Impact Statement (DIFR-EIS).** The DIFR-EIS documents the planning process undertaken for the study.

The **USACE** is leading the study in collaboration with the non-federal sponsor, the **GLO**

THE STUDY TEAM AND PUBLIC

U.S. Army Corps of Engineers
(The Lead Agency)

Texas General Land Office
(The Non-Federal Sponsor)

You
The Public and Local Stakeholders

THE NEPA AND FEASIBILITY STUDY PROCESS

How can I provide comments on the DIFR-EIS?

U.S. Army Corps of Engineers, Galveston District
Attention: Ms. Jennifer Morgan, Environmental Compliance Branch, Regional Planning and Environmental Center
Mail: P.O. Box 1229, Galveston, TX 77553-1229
Email: CoastalTexas@usace.army.mil
Website: coastalstudy.texas.gov

All comments must be received or postmarked by January 9, 2019

Where are we in the study process?

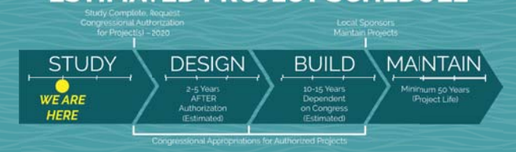
The study team is currently in the ***public comment period*** for the DIFR-EIS. Following this period, the study team will review and address the public comments received. The USACE and GLO leadership will use this information to produce the final report.

It is anticipated that the ***Final Integrated Feasibility Report and Environmental Impact Statement*** will be published for public, state, and agency review in ***2020***.

What are the next steps?

After the study phase, a Recommended Plan will be refined and proposed for congressional authorization and funding. Construction of the Recommended Plan is dependent upon approved congressional funding.

ESTIMATED PROJECT SCHEDULE



Study Milestones

- Final submittal of scoping comments – September 2014
- Identified viable projects for consideration, evaluation and comparison – June 2016
- Identified projects for feasibility analysis and identify a Tentatively Selected Plan - May 2018
- Released DIFR-EIS for public review – October 2018
- Upcoming: Release Final IFR-EIS for final comment – Fall 2020

COASTAL **TEXAS** STUDY

The Tentatively Selected Plan

The Tentatively Selected Plan (TSP) is formulated to achieve an integrated system of risk reduction actions and includes a combination of ***both coastal storm risk management and ecosystem restoration measures*** that work together to enhance coastal resiliency.

Coastal Storm Risk Management (CSRM) and Ecosystem Restoration (ER) measures were developed and evaluated through ***several screening workshops*** and then assembled into alternatives to ***reduce risk of coastal hazards to the natural and human environment*** for the Texas coast.

The study team recognizes that there are ***opportunities to optimize*** the design and alignment of the TSP to ***minimize impacts*** to structures and the environment.

In ***future planning and design phases***, the study team will take into account public comments and best engineering practices to optimize specific details of the TSP such as levee heights, floodwall heights, pump station sizes, use of nonstructural features, and precise project alignments.

The TSP includes 3 main components:

1. Comprehensive Ecosystem Restoration along the Texas Coast
2. A Coastal Barrier CSRM system to address storm surge in the upper Texas Coast
3. A South Padre Island CSRM measure to address storm surge and erosion in the lower Texas Coast

The total estimated cost of the Tentatively Selected Plan ranges ***between $23 billion and $32 billion*** based on the best information available and reflects potential changes in material costs, schedule, and unforeseen issues.

This range is based on the best information available during development of the DIFR-EIS and reflects potential changes in materials costs, schedule, and unforeseen issues.

The Tentatively Selected Plan cost estimate will ***continue to be developed and refined*** in the future planning and design phases.

ECOSYSTEM RESTORATION MEASURES

Marsh Restoration · Beach Restoration · Oyster Reef Restoration · Island Restoration · Breakwater Creation · Hydrologic Restoration

COASTAL **TEXAS** STUDY

Coastal Storm Risk Management and Ecosystem Restoration

Coastal Storm Risk Management

Coastal storm risk management (**CSRM**) measures consist of features such as levees, floodwalls, navigable and environmental surge barrier gates, raising structures, and home buyouts.


Reconstructed Levees, New Orleans, Louisiana


Malamocco Tidal Gates, Venice, Italy


Storm Surge Barrier, Maeslantkering, Netherlands

Coastal storm risk management (**CSRM**) and **ecosystem restoration** (**ER**) measures work together to ***restore and enhance*** ecologic coastal features and ***reduce the risk*** of coastal storm damage.

Structural CSRM components are supported by ER measures that provide a ***natural buffer and multiple lines of defense*** from coastal storms.


Port Aransas, Texas


South Padre Island, Texas

Ecosystem Restoration

Ecosystem restoration (**ER**) measures consist of features that include habitat restoration and shoreline erosion control through wetlands, oyster reefs, beach/dune, and island restoration.

ER measures address important coastal ecosystems in need of restoration, including wetlands, seagrass beds, sea turtle nesting habitat, piping plover critical habitat, and bird island rookeries.

Combinations of ER measures formulated in a specific geographic location restore diverse habitats and provide ***multiple lines of defense***

First lines of defense for coastal communities during storms and hurricanes are islands and shorelines with beach and dunes that form the Texas coastal barrier systems.

Second lines of defense include wetlands, marshes, rookery islands, and oyster reefs. First lines of defense include CSRM structural features.


Second Line of Defense


First Line of Defense

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